

CLAIMS

What is claimed is:

1. (Currently amended) A nucleic acid which comprises:

P_x – S_x –(ZR)–nucleic acid encoding a transport peptide–(Z_1Z_2)– nucleic acid encoding a protein(Y)–T; wherein:

P_x comprises a promoter;

S_x comprises a nucleic acid encoding a signal or leader;

~~B_x is a chemical bond;~~

Z is a codon for lysine or arginine;

R is an arginine codon;

transport peptide comprises hirudin or lepirudin;

Z_1 is a codon for lysine or arginine;

Z_2 is a codon for lysine or arginine;

protein(Y) comprises a protein, selected from the group consisting of mini-proinsulin and proinsulin, said protein produced and secreted by yeast; and

T is a terminator.

2-5. (Canceled)

6. (Original) A multicopy vector comprising the nucleic acid of claim 1.

7. (Original) A plasmid comprising the nucleic acid of claim 1.

8. (Original) A host cell comprising the nucleic acid of claim 1 as a part of the host cell chromosome, as a part of a mini-chromosome, or extra-chromosomally.

9. (Original) The host cell of claim 8, wherein the host cell is a yeast.

10. (Previously Presented) The host cell of claim 9, wherein the yeast is selected from *Saccharomyces cerevisiae*, *Kluyveromyces fragilis*, *Hansenula polymorpha*, and *Pichia pastoris*.

11. (Original) A host cell comprising the multicopy vector of claim 6.

12. (Original) A host cell comprising the plasmid of claim 7.

13-37. (Canceled)

38. (Previously Presented) The nucleic acid according to claim 1 wherein the hirudin is selected from the group consisting of Val-Val-hirudin and Ile-Thr-hirudin.